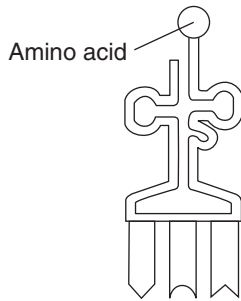


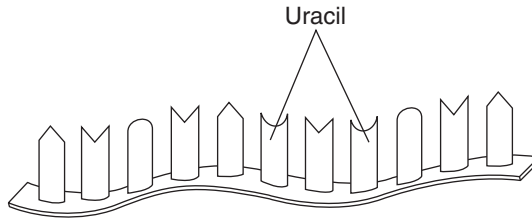
## Chapter 12 DNA and RNA

## Chapter Vocabulary Review

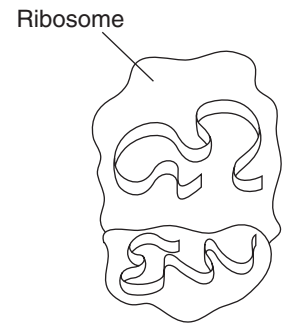
**Labeling Diagrams** *On the lines provided, identify each kind of RNA.*



1. \_\_\_\_\_



2. \_\_\_\_\_



3. \_\_\_\_\_

**Matching** *On the lines provided, write the letter of the answer that best matches each description.*

- |                           |  |
|---------------------------|--|
| _____ 4. transformation   | a. process in which one strain of bacteria changes into another one                |
| _____ 5. bacteriophage    | b. process in which DNA makes a copy of itself                                     |
| _____ 6. histone          | c. protein that DNA wraps around in eukaryotic chromosomes                         |
| _____ 7. replication      | d. virus that infects bacteria   |
| _____ 8. DNA polymerase   | e. region of DNA that indicates to an enzyme where to bind to make RNA             |
| _____ 9. promoter         | f. a change in the genetic material  |
| _____ 10. introns         | g. sections of RNA molecules that are not involved in coding for proteins          |
| _____ 11. codon           | h. a group of genes that operate together  |
| _____ 12. mutation        | i. three nucleotides that specify a single amino acid to be added to a polypeptide |
| _____ 13. polyploidy      | j. process in which cells become specialized in structure and function             |
| _____ 14. operon          | k. the principal enzyme involved in DNA replication                                |
| _____ 15. differentiation | l. condition in which an organism has extra sets of chromosomes                    |

**Completion** *On the lines provided, complete the following sentences:*

16. A(An) \_\_\_\_\_ is made up of three parts: a deoxyribose sugar, a phosphate group, and a nitrogenous base.
17. The principle of \_\_\_\_\_ states that hydrogen bonds can form only between certain bases in DNA.

18. Eukaryotic chromosomes contain both DNA and protein tightly packed together to form a substance called \_\_\_\_\_.
19. During the process of \_\_\_\_\_, RNA molecules are produced by copying part of the nucleotide sequence of DNA into a complementary sequence in RNA.
20. The enzyme that uses one strand of DNA as a template to assemble nucleotides into a strand of RNA is called \_\_\_\_\_.
21. After introns have been cut out of RNA molecules, the remaining pieces called \_\_\_\_\_ are spliced together.
22. The decoding of an mRNA message into a protein is known as \_\_\_\_\_.
23. The three bases on the tRNA molecule that are complementary to one of the mRNA codons are called a(an) \_\_\_\_\_.
24. When the *lac* repressor protein binds to the \_\_\_\_\_, the *lac* operon is turned off.
25. A series of genes, called the \_\_\_\_\_, controls the development of organs and tissues in various parts of an embryo.